

MIRACLE PLANTS FROM SOUND WAVES!

***If Sonic Bloom
takes off, it
will end world
hunger —
and bankrupt
the world's
agri-chemical
companies.***

Extracted, with permission, from the book

Secrets Of The Soil

by Peter Tompkins & Christopher Bird
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Plants, says Steiner, can only be understood when considered in connection with all that is circling, weaving, and living around them. In spring and autumn, when swallows produce vibrations as they flock in a body of air causing currents with their wing beats, these and birdsong, says Steiner, have a powerful effect on the flowering and fruiting of plants.

A bird's-eye view across country south and east of La Belle, midway between the great Lake Okeechobee and Sanibel Island, reveals an ocean of citrus orchards cut by a skein of dusty 'sea lanes', extending for miles toward the shores of the Gulf of Mexico, once a paradise for seashell hunters until ravaged by pollution.

Any bird overflying this greensward in the mid-1980s would have been perplexed by the lack of avian fellows among millions of orange trees growing in the confines of Gerber Grove, saturated by a fog of chemicals laid down to ward off swarms of insects—except in Section I. There a multitude of feathered fauna darted among the trees or perched singing in their branches.

To this oasis the birds had been attracted, not by a natural concert of their colleagues; but by a sonic diapason closely resembling birdsong, which to human ears—incapable of distinguishing its varied harmonics—recalls the chirping of a chorus of outsized crickets.

This sonic symphony was being emitted from a series of black loudspeaker boxes set atop twenty-foot poles, each resounding over an oval of about forty acres. Its purpose was not so much to attract birds as to increase the size and total yield of a crop of fruit, 'hung', as they say in Florida parlance, on trees as if it were a collection of decorative balls at Yuletide.

"I have hung oranges the size of peas, shooter marbles, golf balls, and tennis balls, some still green, others fully ripe, all on the same tree, all at the same time," said Roy McClurg, a former Union City, Indiana, department-store magnate, part owner of the Gerber Grove.

We had driven down at dawn to his 320-acre holding, where two young field hands, brothers-in-law, each with a tractor and a trailer tank of foliar feed had started off between two long rows of trees, dousing them with an aerosol mist from top to bottom while a speaker, similar to the ones on the poles, tuned to maximum volume, shrieked a whistling pulse easily audible above the roar of the tractor motors.

Pointing to one of his many trees, McClurg raised his voice: "This is the typical fruit I'm getting with this brand-new method called Sonic Bloom. It synchronously combines a spraying of the leaves of any plants, from tiny sprouts to mature trees, with a broadcast of that special sound. With that process, simple but scientifically unexplained, I've been able for the first time to get fruit all over the inner branches of my orange trees, greatly adding to the 'umbrella'-type set which is everywhere the norm.

Back in his pleasantly refurbished clapboard house, oldest in the county, McClurg took from his refrigerator a dozen oranges the size of small grapefruit. "These were picked at my grove yesterday, he explained. "Ordinarily oranges as big as these would be pithy and woody inside, with very little juice. Slicing four of them with a razor-sharp butcher's cleaver, McClurg held up several of the hemispheres dripping with juice to show off rinds no thicker than an eighth of an inch. An electric juicer processed three of them to nearly fill a pint-sized glass.

"Oranges like these," said McClurg, "will give me a crop with at least a 30 per cent increase in yield and a marked rise in 'pounds solid'. Add to that the fact that the Garvey Center for the Improvement of Human Functioning, a medically-pioneering research group in Wichita, Kansas, has tested the juice to show an increase of 121 per cent in natural vitamin C over normal oranges, and you can understand that this new 'Sonic Bloom' discovery we're talking about not only improves quantity, but also quality. I've run blind-

fold tests with scores of ordinary people who have compared the taste of my juice with that of oranges from many other groves, and they all selected mine as the most lip-smackingly superior."

While McClurg was happily harvesting his oranges, Harold Aungst, a dairy farmer milking a two-hundred-head herd of Holsteins in McVeytown, Pennsylvania, was equally happily applying the Sonic Bloom method to a hundred-acre field of alfalfa, the deep-rooted leguminous plant grown for hay, brought to Spain in the eighth century by invading Moors and since spread to create agricultural wealth all over the world. Nor did his animals have any difficulty distinguishing the high-quality fodder sprayed with Sonic Bloom.

That year Aungst took off five cuttings, one shoulder-high and so thick he had to gear his tractor down to low-low to pull his cutter through it. With this harvest, Aungst won the Pennsylvania State five-acre alfalfa growing contest over ninety-three other contestants by producing an unheard-of 7.6 tons per acre as against a state average of 3.3 tons.

To dairyman Aungst, the size of his harvest was not its most important characteristic. Hay from this alfalfa fed to his herd that winter allowed the cows to step up milk production from 6,800 to 7,300 pounds per hundred-weight of cow, yet eat one quarter less feed. "I could hardly believe it," said the usually peppery Aungst, third-generation owner of his property. "My cows were devouring the alfalfa, stems and all. Other years they'd leave the stems just lay. A cow's nose is the very best barometer to tell how good your crop is. Cows are really finicky about what they eat. I threw down hay from another of my fields alongside this record-breaking alfalfa and the cattle first went for the feed exposed to that funny sound every time, changing over to the other only when the good stuff was all gone."

One clue to the cows' preference was revealed in a test run on protein analysis by an infrared scanner at the Pennsylvania State University 'Ag-Days' exhibition and fair. Aungst's sound-exposed hay scored a record 29 per cent for protein and an extremely high 80 percent for Total Digestible Nutrients (TDNs). At the fair the same test showed similar percentages for Aungst's soybeans.

Across the United States in the Tiwa Indian pueblo of San Juan, New Mexico, twenty minutes' drive north-west of Santa Fe, the highly alkaline desert soils, composed of playa clay called adobe, best suited when mixed with straw to make cheap building blocks for houses, can be as hardpacked and impenetrable as a New York sidewalk. Yet a garden under the ministrations of the same aurally-spiced nutrition as used in McVeytown and in Florida was growing as if in Eden.

Alongside more than fifty kinds of herbs, vegetables were flourishing, including tomatoes and carrots never before grown in that arid region at the confluence of the Chama and Rio Grande rivers.

To Gabriel Howearth, a bearded, pony-tailed master gardener employed by the tribe, veteran of several years' working with Maya Indian farmers in Mexico's Yucatán peninsula, Sonic Bloom was as miraculous in its results as was the Mayas' ability to grow crops with no chemical additives by simply mentally communicating with them in some mysteriously hermetic way, long part of their ethos.

"As you can see," said Gabriel, parting the purplish-green leaves of a German beet to cup his hands around the top hemisphere of a swollen mauve-maroon root much larger than a softball, "I can't get my hands completely around it. All these beets, which normally scale off at no more than four pounds, will weigh at least nine, possibly ten."

THE ORIGINS OF SONIC BLOOM

The idea was seeded in the mind of its developer one bitter cold winter day in 1960 in the Demilitarised Zone between North and South Korea. Dan Carlson, a young Minnesota recruit serving with the US Army motor pool, happened to see a young Korean mother deliberately crush the legs of her four-year-old child beneath the back wheel of a reversing two-ton GMC truck. Tearfully, the woman explained in distraught and incoherent English that, with two more children starving at home, only by crippling her oldest boy could she beg enough food in the city to feed her entire family.

There and then, Carlson decided he would single-mindedly devote the rest of his life to finding an innovative and cheaper way to grow food, accessible to anyone with even the smallest and poorest plot of land. Back home in Minnesota, he enrolled in the

University's Experimental College. Like David Vetter at Ohio, he was allowed to design his own curriculum and reading programme in horticulture and agriculture.

Soon he concluded that in poor soils, if plants could be appropriately fed, not through their roots, but through their leaves via the minute mouthlike openings called stomata—which plants constantly use to exchange gaseous aerosols and mists with the surrounding atmosphere—they might flourish and even grow rapidly in soils that were acidulous, alkalinely salty, arid, desert, or otherwise deprived of balanced nutrients.

But some motive force, he soon realised, was needed to awaken the stomata to action. Puzzling as to what this might be, Carlson stumbled on a record called *Growing Plants Successfully in the Home*, devised by George Milstein, a retired dental surgeon who had won prizes for growing colourful bromeliads, members of an extended plant family as diverse as the pineapple and Spanish moss. Milstein's innovative idea had been to get a recording company, Pip Records, to amalgamate into a popular tune the pure sound frequencies broadcast by University of Ottawa researchers to increase wheat yields, which he had read about in *The Secret Life of Plants*.

Picking up where Milstein left off, Carlson focused on finding frequencies that would motivate the stomata to open and imbibe. Though he did not at first suspect a tie with the sound that caused the birds to flock to McClurg's orange grove, he managed through a stroke of spiritual insight to hit upon a combination of frequencies and harmonics exactly accordant with the pre-dawn bird concerts that continue past sun-up into morning.

To help create a new cassette tape of popular music into which his non-musical sonics could be embedded for inclusion in a Sonic Bloom home kit for use in small backyard gardens and greenhouses,

...at least a 30 per cent increase in yield, plus an increase of 121 per cent in natural vitamin C over normal oranges...



es and on indoor plants, Carlson enlisted the technical expertise of a Minneapolis music teacher, Michael Holtz. Within seconds of hearing Carlson's 'cricket chirping' oscillating out of a speaker, Holtz realised its pitch was consonant with the early-morning tree-top concert of birds outside his bedroom window.

The first cassette, using Hindu melodies called ragas, suitable to an Indian ear, and apparently delightful to both bird and plant, induced stomata to imbibe more than seven times the amount of foliar-fed nutrients, and even absorb invisible water vapour in the atmosphere that exists, unseen and unfelt, in the driest of climatic conditions. But the sound proved irritating to American horticulturalists and farmers, especially women, apart from those few whose tastes for the exotic accepted ragas as in vogue.

Looking for western music in the range of Carlson's highest frequencies, the ones which in Hindu experiments had shown the best bumper crops of corn, Holtz culled several baroque selections from *The Dictionary of Musical Themes*, settling on the first movement of Antonio Lucio Vivaldi's *The Seasons*, appropriately called "Spring". "Listening to it time and again," said Holtz, "I realised that Vivaldi, in his day, must have known all about birdsong, which he tried to imitate in his long violin passages."

Holtz also realised that the violin music dominant in "Spring" reflected Johann Sebastian Bach's violin sonatas broadcast by the Ottawa University researchers to a wheatfield, which had obtained remarkable crops 66 percent greater than average, with larger and heavier seeds. Accordingly, Holtz selected Bach's *E-Major Concerto for Violin* for inclusion in the tape. "I chose that particular concerto," explained Holtz, "because it has many repetitious but varying notes. Bach was such a musical genius he could change his harmonic rhythm at nearly every other beat, with his chords going from E to B to G-sharp and so on, whereas Vivaldi would frequently keep to one chord for as long as four measures. That's why Bach is considered the greatest composer that ever lived. I chose Bach's string concerto, rather than his more popular organ music, because the timbre of the violin, its harmonic structure, is far richer than that of the organ."

Holtz next delved into what for him was a whole new world of bird melodies. In the 1930s, Aretas Saunders, author of *Guide to Bird Songs*, had developed a method of visually representing, through a newly devised audio-spectrogram, the arias of singing birds that can neither be described in words nor adequately shown with any accuracy on a musical staff.

Soon Holtz came to see where the various predominating pitches in birdsongs could be calibrated by reference points on the musical scale and their harmonics. Don Carlson had instinctively hit upon frequencies that were the ideal electronic analogues for a bird choir. "It was thrilling," said Holtz, "to make that connection. I began to feel that God had created the birds for more than just freely flying about and warbling. Their very singing must somehow be intimately linked to the mysteries of seed germination and plant growth."

"I guess Rachel Carson was right," Holtz said nostalgically. "The spring season down on the farms is much more silent than ever before. DDT killed off many birds and others never seem to have taken their place. Who knows what magical effect a bird like the wood thrush might have on its environment, singing three separate notes all at the same time, warbling two of them and sustaining the others!"

One morning while Holtz was mentally bemoaning all the species of birds that had vanished from Iowa, a yellow warbler, looking for all the world like a canary, flew, as if reading his

mind, to perch on the top of a tree outside his bedroom window and, as if cued by his band maestro's baton, burst into song. Holtz grabbed his tape recorder and managed to register an aria that went on and on for nine to ten minutes. In the field guide he found that the little bird registers a high 8,000 cps. Drawn deeper into the subject, Holtz consulted books that detail the structure of birdsong, such as *Vocal Communication in Birds, Born to Sing*, and *Bird Sounds and Their Meanings*. He also consulted biological texts to find that tiny villi, minute shaggy hairlike tufts in the cochlea of the human inner ear, vibrate to certain 'window' frequencies.

"What I was trying to figure out with Dan Carlson was what exactly we were oscillating in plants," Holtz explained.

Looking at drawings of a cell, Holtz further discovered the representation of a subcellular structure within the cytoplasm known as a *mitochondrion*. Pointing to the enlarged drawing of one of them he asked: "Of what does their shape remind you?"

A glance suggested the form of the wooden-bodied sound box of a violin or viola.

"That's right!" Holtz exulted. "And I found it more than of passing interest that the resonant frequency of mitochondria is 25 cps, which, if interpolated upward, gets to a harmonic of 5,000 cps, the same frequency used by Dr Pearl Weinberger to grow winter wheat two and a half times larger than normal with four times the average number of shoots, as reported in Dorothy Retallack's *The Sound of Music and Plants*. It could be that the frequencies he used vibrated not only the mito-

chondria in the wheat seeds, but the water surrounding them, increasing the surface tension and thus enhancing penetrability through the cell wall."

Holtz connected this to Retallack's having also discovered that the transpiration rate rose, indicating greater growth activity in her experimental plants when they 'listened' to Bach, 1920s jazz, or the Indian strains of Ravi Shankar's sitar; whereas exposed to hard rock, with the same rate nearly tripled, within two weeks the plants were dead.

"I believe such frenetic music," said Holtz, "was too much for their overall systems. The intense, grindingly monotonous energy in that rock sound could have virtually blown the cells apart! Young volunteers for the US Navy who have listened to that type of music since childhood have been rejected because of partial deafness, even before reaching the age of twenty."

Asked if one could simply play the recording of a crescendo involving all of a symphony orchestra's instruments with their hundreds of frequencies and harmonics and allow plants to select those best suited for their needs, Holtz replied: "You have to take into account a law of diminishing returns. Too big a dose of anything is not necessarily of greater benefit than just a little or even a tiny dose."

It seemed significant that Holtz, the musicologist, could say this without any knowledge of homeopathic 'potentising'.

Carlson, whom we met in Kansas City at one of Charlie Walters's annual eco-agriculture conferences, explained his approach with lively enthusiasm. "What I've tried all along to do with the sonic part of Sonic Bloom," he expostulated, his jet-black hair and pirate beard reflecting the hue of the Western-cut suit he wears for public lectures, giving him the air of an Amish elder, "is to stay within boundaries set by nature. I think there are certain cosmic forces which can account, however 'unscientifically', for much of our success. Properly adapted they will get plants to grow better, perhaps get cows to give more milk, or even inspire people to relate to one another more harmoniously. There's plenty

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of evidence that various frequencies of both sound and colour can be curative. But 'hard rock' is not consonant with nature's own harmonics. I believe birds exposed to it for long periods would fall ill and die, just as Retallack's plants withered away."

He waved his hands like an evangelist. "I get over a hundred calls a year, from people experimenting with my broadcasts. Most of them say that when the sound is turned on plants actually turn away from the sun to grow toward the speakers! Always! To me that means the sound is as important to plants as whatever we understand about photosynthesis. Perhaps that's what Rachel Carson meant when she intimated that 'spring' might one day be silent without Vivaldi's violins."

With a cold Minnesota winter coming on, and limited space in which to carry on his early experiments in a VHA-financed home, Carlson took a big step: he spent eighty-eight cents on a tropical *Gynura aurantiaca* or purple passion vine. Known also as a velvet plant, native to the Indonesian island of Java, its fleshy teardrop leaves are densely covered with violet veins and hairs, and its yellow-orange dishlike flowers exude a nasty smell. But to Carlson this was his cherished baby. Once a month with a cotton swab he applied doses of nutrient to the tip of his vegetal pet, almost homeopathically weak doses, while simultaneously getting it to 'listen' to his sonics. The swabbing turned the tip a withering brown, but quickly a new sprout burgeoned forth one leaf below the dead tip to grow at an accelerated rate. Within a few days, the original tip had completely recovered and was spurting rapidly ahead, both shoots exhibiting thick, healthy stalks and exceptionally large leaves.

As the vine crawled upward out of its pot, Carlson screwed teacup hooks into the wall of his kitchen, six inches apart, to support it; and so fast did the vine race for the hooks, he had to add half a dozen every week.

At which point he made another startling discovery. If he snipped the growing tips with a scissors, the Javanese plant, far from daunted, put out a new shoot at the first leaf node below the cut.

As novel as this seemed to Carlson, he was even more puzzled by his pet's growing not only the teardrop leaves characteristic of its species, but also saw-toothed ones typical of its Indian cousin *Gynura sarmentosa*, along with completely alien split leaves previously never seen on any purple passion plant. The sound-plus-solution treatment appeared to be strangely affecting something to do with his vine's genetic qualities even as it grew.

In a paper on his experiment submitted to his professor, Carlson presciently asked: "Does one cell of a plant genus contain all the characteristics of all the species of that genus? If not, why has my plant, grown from a *Gynura aurantiaca* cutting, developed leaves, over 90 percent of its length, peculiar to the *Gynura sarmentosa* and, at the same time, exhibited an entirely new split-leaf form? Could the combined application of nutrient and audio energy result in such rapid growth rate that the very process of evolution is condensed? Have I enabled my plant to adapt more quickly to its environment? Is this the reason for the different leaf characteristics appearing on one plant? If any of these questions can be answered 'yes', can this knowledge be applied to other plants? Could food crops be treated to achieve more rapid growth and better adaptability to their own or alien environments?"

As winter wore into spring, and summer into fall, Carlson noticed another oddity: his plant had bloomed not the usual once, but twice. Even more fantastic was its incredibly extending length. In only the first three months, the vine, which normally never exceeds a length of 18 to 24 inches, had grown a total stem of 150 feet. During the rest of the year it pushed on at the same

rate, out of the kitchen through an inch-and-a-half hole bored in the wall leading to the living room, where it boustrophedonly roved back and forth along the ceiling on wires strung eighteen inches apart, to attain a length of over a tenth of a mile.

During the next year Carlson began snipping four-inch shoots from his vine, which he started in small plastic pots. Four hundred of these, labelled with his address and phone number and a request to call him for a replacement should the shoots die, he took to a flea market, where they rapidly sold for \$4 apiece.

"I had many calls," he reminisced, "but none were to complain about sick or dying plants. Instead the callers wanted to know why the offshoots from my mother plant were growing twenty, thirty, forty, fifty feet long, and even more. I at once thought that this unheard-of development might give rise to the possibility of whole new strains of hardier superflora."

Despite this achievement, worthy of Luther Burbank, when Carlson, in happy excitement, asked members of his university committee to come to his house to see for themselves what he had done, their only reaction amounted to a yawn.

Didn't he realise, they asked, that, because his results had been obtained on a non-edible house plant, they were of no commercial value or interest?

"I was dumbfounded," said Carlson. "I could hardly believe this reaction. Here was the first time in their lives they had heard of sound being able to enhance the uptake of nutrients to produce the kind of

growth I was getting, and they cast the result aside as worthless."

Desperate to get anything into the public record that would substantiate his achievement, Carlson wrote to Guinness Superlatives Limited in Middlesex, England, publisher of the now famous *Guinness Book of World Records*, which sent to Minnesota to check his claim "specialists in the matter of freaks in the plant kingdom".

Carefully measuring his plant's stem, inch by inch over its entire length, the freak specialists congratulated Carlson. That same autumn the new edition of the record book had an entry on page 113 extolling his find. To counter the notion that his new method was commercially valueless, Carlson next began to supply portable sonic equipment and nutrient mix to backyard gardeners who had called him after the *Minneapolis Star* ran a huge photo of the Carlson family standing under the passion plant, its leaves intertwined in the supporting chain of a chandelier before proceeding, through additional holes in the wall, into his children's bedrooms.

Not to be outdone, the *St Paul Dispatch*, describing his African violets, with more than four hundred blooms in a full spectrum of colours,

In only the first three months, the vine, which normally never exceeds a length of 18 to 24 inches, had grown a total stem of 150 feet.



and his morning glories, purple, blue, white, red, and pink, as enveloping his house from its foundation to its roof eaves, quoted Carlson as foreseeing a Jack-and-the-Beanstalk world with gigantic flora capable of feeding multitudes while their stomata increased the Earth's supply of life-giving oxygen.

Though he did not inform the reporter that the multicoloured, old-fashioned trumpet-shaped morning glories had come from an ancient seed packet found by one of his mother's friends when she was cleaning out her attic, it did occur to Carlson that if Luther Burbank could coax a spiny cactus into losing its thorns, not through crossbreeding but by informing the plant that it no longer needed them because he would 'protect it', he too might get his climbing plants to adapt to human desires.

"I subscribed to Burbank's idea," Carlson told us, "that at the highest level, plants are capable of creating what is in the mind of man as a means of assuring their survival into future generations. I did not discount the many stories about trees which had borne no flowers or fruits for years, suddenly blossoming and bearing when threatened with an axe or a chain saw."

One spring, as he collected the seeds from his morning glories for successive annual planting, Carlson and his twelve-year-old daughter, Justine, meditated on how to get the vines to respond to their lovingly felt desires by focusing on their favourite hues, purple for Dan, pink for Justine. "We believed," said Carlson, "that the *plants* might respond to the colours we favoured and draw closer to us as *we* were mentally and emotionally drawing closer to them." By late summer when the vines were putting out the usual mixed spectrum of blooms over most of Dan's house, he found massed all around his daughter's bedroom window nothing but pink flowers and around his own bedroom window only purple ones.

"This confirmed to me," he said, "that we can, in some still undefined way, communicate with plant life, which is even capable of altering the colours of flowers and the shapes of leaves. It must somehow be based on trust. The plants must feel your intent and realise that if they respond you'll save their seeds to assure their flourishing continuance."

Even more intriguing was Carlson's belief that his method would allow him to determine the very likes and dislikes of plants. By exposing them to a varied menu of nutrients hitherto unavailable to them, he aimed, through their reactions, to find out which selections they might prefer, instead of just forcing them, like human babies plied with distasteful turnips or liver, to accept what their parents believed, usually mistakenly, to be good for them.

This he hoped might ultimately lead to the elimination of deficiencies resulting in bad-tasting fruit or vegetables, the eradication of plant disease, and even, with their exposure to spice-laden aerosols such as mint, cinnamon, or nutmeg, the creation of apples with mint, cinnamon, or other flavours, right on the tree instead of in the pie.

"What I began to realise," said Carlson, "was that my method was *challenging the seeds' potential*, a potential maximised with the right number of Sonic Bloom sprays—which have turned out to be five—put on two weeks apart." Striking a massive fist on the table for emphasis, he added: "I believe I've come across a new principle that can be called *indeterminate growth*! It shatters the idea that plants are genetically limited to a given particular size or yield."

This belief in a lack of limitation led Carlson to another principle: *geometric progression*. We began regularly to discover that plants treated during one growing season would pass along whatever changes were taking place in them, and create, right through their seeds, a successive generation 50 per cent larger and more fruitful, even when the newly generating plants remained untreated with Sonic Bloom. I also call this *genetic elasticity*, the latent ability of plants to exhibit characteristics hidden in their gene pools,

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SONIC BLOOM - MIRACLE PLANTS FROM SOUND WAVES!

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pulling out advantageous ones that may have been hidden for hundreds of years. This is connected to the ever-bearing trait brought out in McClurg's oranges."

Suggesting that the potentials in plants to respond to human wishes should be closely examined, he lamented that botanists, plant breeders, and genetic engineers have failed to understand the problem. "Scientists are rushing headlong into tampering with plants, monstrously slicing and splicing genes with as much surgical fervour as the ghouls who cut and maim animals in laboratories. This has led some of them to proudly announce that in order to produce a leaner grade of pork, they have developed a cross-eyed hog that staggers pathetically on legs that can hardly hold it up." He looked up and away with the firm yet benevolent gaze of a committed soul. "We should *tender* plants and animals, not distort God-given gifts still unrevealed in his creatures, but coax these gifts and learn to live cooperatively with all God's creatures."

But perhaps the most encouraging prospect for fulfilling Carlson's dream of growing large quantities of food on very small plots of ground in a very simple manner is the marriage of his system with one

developed by Ron Johnston of Mississippi, an amateur farmer in his thirties who doubles as a night nurse in a hospital in Memphis, Tennessee.

In a mixture of nothing but sawdust and sand in long rectangular boxes ten inches high, Johnston has been growing a staggering amount of delicious healthy produce. With discarded lumber from the sawmill, plus two pickup trucks full of free sawdust and one of sand, each box requires no more than a few hours of labour to build; and by Johnston's conservative figures a box eight feet wide by sixteen feet long can produce as many as 800 cantaloupes or 5,000 pounds of tomatoes—many times more than could ever be grown on the same size plot of ground.

"It all came together for me," says Johnston, "three years ago. Before that, I couldn't grow a thing down here on the dead soil of Mississippi. Then I got hold of a tape of Dan Carlson and I ran into a farmer using microbes. I also read about the French intensive method and that gave me the idea for the boxes. The system eliminates ploughing, cultivating and weeding. A daily watering can be automated and extremely economic. My water bill has gone up only a few dollars since I start-

ed; and during the drought of 1988, while my neighbours were cropless, my plants were a jungle of healthy green."

With a mere expenditure of \$150, Johnston added a frame and plastic hot-house to his first box of sawdust and sand to produce tomatoes two months before his neighbours. Each tomato plant, planted seven inches apart, and producing twenty-five to thirty blossoms, gave as many as sixteen pounds of fruit per plant, some individual specimens weighing as much as a pound and a half. The chlorophyll content of the leaves was almost doubled, and they contained so much sugar that insects nibbling on them were killed by an overdose of alcohol. Johnston uses no insecticides.

Two hundred strawberry plants in a narrower box produced two hundred quarts of strawberries with double the normal sugar content. And just one normal box of bean plants alone is enough to feed a family of four for a year. With cantaloupes clipped onto strings and climbing toward the rafters of the greenhouse, Johnston is able to hang twenty full-sized fruits from each plant.

Sawdust and sand form a fluffy consistency that allows plenty of essential air and water to reach the roots. But the real

CANCER CURE?

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enough to do that. This is what they call the placebo effect. The placebo effect actually runs close to 30% in many cases.

SS: So CanCell is more than just someone holding up a bottle of water and thinking into it.

ES: Oh absolutely. Yes.

SS: It's a whole new non-technical field of technology.

For further information you can call the Volunteer Request Line, 11.00 am to 3:00 pm (Eastern Time USA) Monday through Friday at (313) 684 5529.

CanCell Update - 29/10/93

NEXUS called the number above and received the following recorded message:

"Because of a Federal Court injunction, we are prohibited from distributing CanCell at this time. However, we are able to send you information about the programme. Send a large S.S.A.E. to:

*Vibrational Research Foundation
PO Box 265, Milford, MI 48381, USA."*

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heroes of the system are forty-seven strains of micro-organisms that Johnston obtains from a cultivator out in California. "I call them piranhas," said Johnston, only half joking. "They devour whatever nutrients are in the air and turn into healthy plant food whatever fertiliser I put into the boxes, transmuting potentially toxic salts into a balanced diet for each specific type of plant, providing them with a continuous flow of nutrients."

One teaspoon of microbes is added to a gallon of water and sprinkled around the plant stems; there they proliferate at the rate of 200,000 a minute, dying off individually every thirty minutes, but lasting, as a strain, as long as there is food for them to feed on. "The microbes," says Johnston, "eat any cheap fertiliser I provide them, and switch the elements around. They can turn potassium into sulphur, or whatever is excess into whatever is scarce. And my microbes feed the plants just what they need, just when they need it, providing them with a variety of minerals, the more of which the plants can get the better they taste and the longer is their shelf life."

Like camels, says Johnston, his microbes

absorb a great deal more water than they need, which they then relinquish to the plants in moments of drought. Well fed, they proliferate down into the soil below the boxes to a depth of several feet, turning it to humus.

But all of this is only half of Johnston's story. The rest is provided by Dan Carlson's Sonic Bloom. Every morning Johnston plays the enchanter sound to his plants, enabling them to suck in element-laden moisture from the air; and once a week he saturates their leaves with Carlson's liquid nutrient. "It all works in concert," says Johnston. "Sand and-sawdust; microbes and fertiliser; Sonic Bloom and sound. Each by itself will not give the same results." ∞

For more information, refer to the advertisement on page 26, or contact:

Dan Carlson Scientific Enterprises, Inc
W. 7964 810th Avenue
River Falls, WI 54022, USA
Tel: (715) 425 1407
Fax: (715) 425 1727